



13281 U.S.PTO
123103

WATER TRAMPOLINE

FIELD OF THE INVENTION

5 The present invention relates to a water trampoline, and more particularly to a water trampoline having a jumping bed with effectively increased surface area and providing a largely enhanced bearing strength.

10 **BACKGROUND OF THE INVENTION**

A trampoline mainly includes a jumping bed tightly stretched over an annular frame by a plurality of radially extended elastic elements. A user may jump 15 on and be continuously rebounded from the jumping bed to do interesting exercise. US Patent No. 6,261,207 granted to Publicover et al. discloses a trampoline having the above-described structure. A safety net is provided to enclose a space above the jumping bed, so 20 as to protect the user from accident due to colliding with the frame or falling off the jumping bed to the floor.

Most conventional trampolines are of a floor type. 25 However, the trampoline may also be used over water surface to create the same rebounding effect. The

currently available water trampoline mainly includes an annular air cushion having a predetermined size to substitute for the supporting legs of a floor-type trampoline, and a jumping bed located in a central open
5 space of the air cushion.

Fig. 1 shows a conventional water trampoline having an air cushion 10 with predetermined size and buoyancy. The air cushion 10 is basically an annular hollow body
10 having a circular or a polygonal shape. A plurality of handles 11 are spaced along an outer peripheral surface of the air cushion 10 to facilitate easy carrying of the air cushion 10 to or from the water surface. A jumping bed 12 is tightly stretched in a central open
15 space of the air cushion 10 by a plurality of elastic elements (not shown) radially extended between the jumping bed 12 and the air cushion 10. And, an outer shielding pad 13 is used to cover a top of the elastic elements. The hollow air cushion 10 allows the whole
20 water trampoline to float on the water surface, and a user may jump on and be continuously rebounded from the jumping bed 12.

The elastic elements for tightly stretching open the
25 jumping bed 12 must be fixedly connected at an end to an inner peripheral surface of the air cushion 10, and

at the other end to an outer periphery of the jumping bed 12. The above-structured water trampoline has at least the following two disadvantages:

- 5 1. The jumping bed 12 must be located within the central open space of the air cushion 10 and is therefore lower than a top surface 14 of the air cushion 10. Thus, a surface area of the jumping bed 12 is limited by the air cushion 10. In other words, the surface area of the jumping bed 12 must be much smaller than the area of the air cushion measured at the top surface 14 thereof.
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2. The elastic element is usually made of a metal material. While an end of the elastic element is connected to the canvas jumping bed 12 having a relatively good bearing strength, the other end of the elastic element is connected to the inner peripheral surface of the air cushion 10 that is usually made of a plastic material and has a relatively weak bearing structure. Therefore, the elastic element could not function in an ideal manner.
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SUMMARY OF THE INVENTION

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A primary object of the present invention is to provide

a water trampoline that has a jumping bed with effectively increased surface area.

Another object of the present invention is to provide
5 a water trampoline that provides an enhanced bearing strength and is therefore safer and more durable for use.

To achieve the above and other objects, the water
10 trampoline according to a preferred embodiment of the present invention includes an air cushion having predetermined size and buoyancy; a supporting ring detachably connected to a top surface of the air cushion, and including a lower ring having a diameter
15 corresponding to that of the top surface of the air cushion, and an upper ring located above the lower ring by a predetermined height; and a jumping bed tightly stretched over the upper ring by a plurality of radially extended elastic elements.

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In a feasible embodiment of the present invention, the supporting ring is detachably connected at the lower ring to the air cushion by a plurality of fastening straps provided on the top surface of the air cushion.

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In a the feasible embodiment of the present invention,

the fastening straps are provided on the top surface of the air cushion at positions having reinforcing patches provided thereat.

- 5 In the preferred embodiment of the present invention, the elastic element is a coil spring having two connecting ends, and one of the two connecting ends is connected to an outer periphery of the jumping bed, while the other connecting end is connected to the upper
- 10 ring of the supporting ring.

BRIEF DESCRIPTION OF THE DRAWINGS

The structure and the technical means adopted by the
15 present invention to achieve the above and other objects can be best understood by referring to the following detailed description of the preferred embodiments and the accompanying drawings, wherein

- 20 Fig. 1 is a perspective view of a conventional water trampoline;

Fig. 2 is an assembled perspective view of a water trampoline according to a preferred embodiment of the
25 present invention;

Fig. 3 is an exploded perspective view of Fig. 2; and

Fig. 4 is a fragmentary enlarged view showing the connection of a supporting ring to an air cushion of
5 the water trampoline of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please refer to Figs. 2 and 3 that are assembled and
10 exploded perspective views, respectively, of a water
trampoline according to a preferred embodiment of the
present invention. As shown, the water trampoline
includes an air cushion 20 having predetermined size
and buoyancy, a supporting ring 30 detachably connected
15 to a top surface 23 of the air cushion 20, and a protective
cover 70 connected to a top of the supporting ring 30.

The air cushion 20 is substantially an annular hollow
cushion defining a central open space 21. In the
20 illustrated embodiment, the annular air cushion 20 has
a polygonal shape. The air cushion 20 is provided on
an outer peripheral surface with a plurality of spaced
handles 22 for easy carrying and moving of the air cushion
20. And, in the illustrated embodiment, the air cushion
25 20 is inflatable.

The supporting ring 30 is made of a metal material, and includes a lower ring 31 and an upper ring 32 located above the lower ring 31 by a predetermined height. The lower ring 31 has a diameter corresponding to that of 5 the annular air cushion 20 measured at the top surface 23 thereof, and can therefore be attached to the top surface 23. In the illustrated embodiment, the lower ring 31 is detachably attached to the top surface 23 of the annular air cushion 20 using a plurality of 10 fastening straps 40 provided on the top surface 23. The fastening straps 40 at the left side of Fig. 4 are loosened to release the lower ring 31, and the fastening straps 40 at the right side of Fig. 4 are fastened to tie the lower ring 31 to the air cushion 20. In the 15 illustrated embodiment, the fastening straps 40 are located on the top surface 23 of the air cushion 20 at positions reinforced with a plurality of reinforcing patches 41, so that the fastening straps 40 have an increased bearing strength.

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In the illustrated embodiment, the upper ring 32 is connected to and supported above the lower ring 31 via a plurality of equi-length vertical bars 33 equally spaced along an outer circumference of the supporting 25 ring 30.

A jumping bed 50 typically made of a canvas material is tightly stretched over the upper ring 32 by means of a plurality of radially extended elastic elements 60. In the illustrated embodiment, the elastic element 5 60 is a coil spring having a predetermined elasticity coefficient and hook-shaped inner and outer ends 61, 62. The inner end 61 of the elastic element 60 is hooked to a reinforced outer periphery 51 of the jumping bed 50, and the outer end 62 of the elastic element 60 is 10 hooked to the upper ring 32, as can be clearly seen from Fig. 4.

The protective cover 70 is an annular member adapted to cover the whole supporting ring 30 and the elastic 15 elements 60 with the jumping bed 50 exposed from a central open space of the protective cover 70. The protective cover 70 attached to the top of the supporting ring 30 not only serves as a protective means but also gives the whole water trampoline a better appearance, as shown 20 in Fig. 2.

The water trampoline of the present invention has the following advantages:

25 1. The jumping bed 50 is located on the top surface 23 of the air cushion 20 instead of locating in the

central open space 21 thereof, and can therefore have an effectively increased surface area.

2. The elastic element 60 is connected at two ends 61,
5 62 to the reinforced outer peripheral edge 51 of the jumping bed 50 and the metal upper ring 32, respectively, and therefore forms an even better resisting structure to provide a largely enhanced bearing strength, making the whole water trampoline
10 safer and more durable for use.

3. When the fastening straps 40 are loosened, the supporting ring 30 along with the jumping bed 50 and the elastic elements 60 as well as the protective cover 70 may be released from the air cushion 20
15 for use on ground or a floor like an ordinary floor-type trampoline.

The present invention has been described with a
20 preferred embodiment thereof and it is understood that many changes and modifications in the described embodiment can be carried out without departing from the scope and the spirit of the invention that is to be limited only by the appended claims.